

## Changing Patterns in Air Quality in Teplice, Czech Republic: Effects of Mitigation

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Air pollution monitoring was initiated in Teplice and Prachatice, two cities in the Czech Republic, from 1992 as part of a joint project involving the U.S. Environmental Protection Agency (U.S. EPA) and the Czech Ministries of Public Health and the Environment. Teplice and Prachatice were chosen for long-term study because the area surrounding Teplice was highly industrialized and polluted, and Prachatice was located in a much less polluted, rural area. Although this joint air pollution health outcome study ended officially several years ago, monitoring has continued. Since 1995, the same sampling and analytical methods, and quality assurance/quality control procedures have been used in both cities. These efforts are supported by receptor modeling studies to determine major air pollution sources. As a result of this collaborative study, all major air pollution sources have either been closed or have had controls installed, and most residences have switched to cleaner energy sources for heating. These controls have been responsible for a dramatic decline in airborne particle concentrations measured at the monitoring site in Teplice. However, recent increases in the price of natural gas compared to the more traditional solid fuels have caused shifts back to the use of solid fuels for home heating. As a result, air quality has deteriorated in many neighborhoods. In addition, entry into the European Union (EU) has resulted in increases in motor vehicle traffic throughout the country. These factors are all reflected in the data, and ongoing collaboration addresses these emerging issues. These changes have most likely resulted in changes in exposure patterns and thus require an evaluation of the effects of these changes on health outcomes.

**DISCLAIMER:** Although this work was reviewed by the U.S. EPA and approved for publication, it may not necessarily reflect official Agency policy.